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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

Redevelopment of Spectrum
to Encourage Innovation in the
Use of New Telecommunications
Technologies

)
)
) ET Docket No. 92-9
) RM-7981
) RM-8004

FURTHER COMMENTS OF
GE AMERICAN COMMUNICATIONS, INC.

GE American Communications, Inc. ("GE Americom") hereby files further comments in the above-captioned matter to respond to the new plan, submitted by Alcatel Network Systems, Inc. ("ANS"), to rechannel the 4 GHz band. In these proceedings, GE Americom has opposed the 4 GHz rechannelization plan proposed in the Further Notice of Proposed Rulemaking, 7 FCC Rcd 6100 (1992) ("FNPRM"), on the ground that the \pm 10 MHz guard band between C-band satellite center frequencies and terrestrial frequencies involved in the current de facto channelization of this band is necessary to avoid harmful interference to video programming downlinked by C-band satellites and seen by over 55 million households. This degree of separation, when coupled with the use of notch filters, has avoided disruption to date.

In recognition of this problem, ANS has proposed a 4 GHz rechannelization plan that retains the \pm 10 MHz of separation that exists today. Specifically, ANS's proposal would keep the current 20 MHz bandwidth terrestrial channels separated at \pm 10 MHz from C-band transponder center frequencies, while opening the

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same terrestrial frequencies to transmitters using 10 MHz channels, 5 MHz channels, 1.6 MHz channels, 800 KHz channels, and 400 KHz channels, all of which would be centered on the existing 20 MHz channels.

GE Americom appreciates ANS's response to the issues raised by GE Americom and other members of the satellite community. Indeed, the ANS proposal does adequately address one problem with which GE Americom was concerned, which is the need for analog C-band satellite signals to be received free of harmful interference.

Unfortunately, however, an overriding issue remains with respect to the ability of the current de facto rechannelization plan to accommodate digital television. In its opening comments, GE Americom expressed concern that even the present \pm 10 MHz degree of separation may not be adequate to protect against the harmful interference that terrestrial signals could inflict upon compressed and other forms of digital television (including Advanced Television). Unlike analog signals, digital signals spread their energy more evenly along the bandwidth. This means that the use of filters to block terrestrial interference would notch out more energy in a digital signal than in an analog signal, thereby significantly degrading it.

While ANS's proposed rechannelization of the 4 GHz band is far superior to that proposed in the FNPRM, GE Americom's position must unfortunately remain that, in order to facilitate the introduction of digital television, the existing channel plan

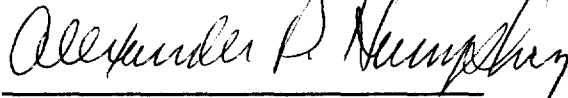
should be retained such that 4 GHz spectrum is not made freely available to terrestrial services displaced from the 2 GHz portion of the spectrum.

GE Americom acknowledges that the potential need of digital television for a greater degree of protection than analog television is a complication of the current de facto channelization of the 4 GHz band. However, in many areas, the 4 GHz band is not heavily used by terrestrial services, making the introduction of digital video services relatively uncomplicated. The principal concern with ANS's proposed rechannelization of the 4 GHz band is that it will permit additional classes, and hence significant numbers of new services to use this band. The introduction of a greater variety of terrestrial transmitters will complicate coordination for new earth stations configured to receive analog television and potentially render impossible the conversion of existing earth stations and the installation of new earth stations to receive digital television. In addition, the introduction of more terrestrial users into this band will increase interference experienced by the growing community of households that use home satellite antennas to receive C-band video programming.

Rather than rechannel the 4 GHz band, the Commission should refocus its efforts in this docket on making the non-government 3.6 - 3.7 GHz band available for terrestrial users, as ANS suggests. ANS has offered a rechannelization plan for this band that it believes will work, and GE Americom sees no reason to

disagree with ANS's assessment. Reallocating the 3.6 - 3.7 GHz band as ANS suggests will not only ease congestion in the 4 GHz band, to the benefit of tens of millions of viewers who rely upon video programming delivered by C-band satellites, but will open new frequencies for users displaced from the 2 GHz band.

Respectfully submitted,



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March 10, 1993

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I, Wanda M. Latta, hereby certify that copies of the foregoing Further Comments of GE American Communications, Inc., were served by first-class mail, postage prepaid, on this 10th day of January, 1993, as shown in the attached Service List.

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